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A REVIEW OF THE GENUS CONANTHALICTUS¹

(Apoidea: Halictidae)

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The genus *Conanthalictus* is known from the southwestern United States and is composed of small bees which collect pollen almost exclusively from the hydrophyllaceous genera *Nama*, *Phacelia*, and *Emmenanthe*. Of the seven species previously described, two are recorded from Texas, one from New Mexico, and four from California. Eight additional species from California are described herewith, seven in the subgenus *Phaceliapis*, and one in *Sphecodosoma*. These new species are from *Nama* or *Phacelia*, except one which is known to collect pollen from the loasaceous genus *Mentzelia*.

The types of the new species are in the collection of the Citrus Experiment Station at Riverside, but will eventually go to the California Academy of Sciences.

Subgenus PHACELIAPIS Michener

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¹Paper No. 1289. University of California Citrus Experiment Station, Riverside, California.

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.....*namatophilus* Timberlake

CONANTHALICTUS BAKERI Crawford

C. bakeri is a common vernal species in the cismontane area of southern California at flowers of *Phacelia distans* and *P. tanacetifolia*. I have seen it from Riverside, The Gavilan, Whittier, the Puente Hills near Whittier, Altadena, Balboa, Acton, and Mill Creek Canyon, San Bernardino Mountains (about 4400 feet). The

type locality is Claremont. It also occurs on the Mohave Desert and specimens are at hand from 11 miles west of Palmdale (Van Duzee), Valyermo, 10 miles southwest of Victorville (Timberlake), the Kramer Hills (Linsley, Stage and Powell), Independence (collector unknown), Mazourka Canyon, 6000 feet, Inyo Mountains, on *Phacelia*, June 1, 1937, and summit of Westgard Pass, June 15, 19, 1937 (Michener). Some of these desert specimens have the mesonotum almost as shiny as in *wilmattae* and intergradation with that species is a possibility.

CONANTHALICTUS WILMATTAE Cockerell

This species occurs on the Colorado Desert at flowers of *Phacelia distans*. The type locality is Tub Springs, Borego Valley, California. I have seen it from Palm Springs, Lost Palm Canyon, Salt Creek, and four miles east of Shavers Well, Riverside County; Beals Well, Imperial County; and Morongo Valley, San Bernardino County.

One female from Morongo Valley, April 21 (Cockerell) differs in the narrower head and is possibly distinct.

Conanthalictus caerulescens Timberlake, new species

C. caerulescens is dark olive-blue with the disk of the mesoscutum and the scutellum black in the female. In the male the mandibles are simple, tapering and hardly dilated within, and the sixth ventral segment is armed with a pair of spines on each side of a low, rounded medio-apical prominence, with the two inner spines rather long, curved and directed horizontally outward.

Male.—Dark olive-blue, the apical depressions of tergites and the disk of pygidial plate brown. Base of mandibles, labrum and clypeus black, and the apical two-fifths of mandibles red. Antennae black, the flagellum brownish beneath. Legs blackish, the tarsi more brownish and the spurs testaceous. Tegulae amber color. Wings moderately dusky hyaline, the nervures and stigma brown, and subcosta fuscous. Head as broad as long, the inner orbits of eyes parallel. Mandibles hardly dilated, obliquely narrowed within close to apex to form a subacute apical tooth. Antennae reaching middle of mesoscutum, with the pedicel slightly longer than the first joint of the flagellum, and the middle joints of flagellum a little longer than thick as seen from above. Venation normal, the third submarginal cell narrowed one-half above. Sixth ventral segment of abdomen with a transversely oval, subapical pit on each side and between the pits a low rounded ridgelike prominence; each pit armed with two spines, the longer one on margin of inner end of pit, curved slightly downward and directed subhorizontally outward; the smaller spine on posterior margin of pit, halfway to the lateral margin and directed downward. Head and thorax minutely tessellate and dull, with minute sparse and obscure punctures on mesoscutum and a few larger

shallow punctures on the clypeus. Basal area of propodeum large, subhorizontal and minutely granular. Abdomen microscopically lineolate with a satiny luster and with sparse minute punctures on the apical half. Pubescence white, rather short, thin and erect on the mesonotum, dense and more plumose on each side of face opposite the antennae and moderately dense on the cheeks; hair of abdomen thin and subdepressed, and that of the apical fimbria longer and brown. Length, 7 mm.; anterior wing, 4.5 mm.

Female.—Similar to male, but mesoscutum except on anterior border and the scutellum black. Mandibles red at middle and black at base and apex. Flagellum more reddish brown beneath than in male. Legs dark, the hind tibiae and tarsi brown. Antennae short, subclavate, with the joints of flagellum thicker than long. Mandibles with a small inner tooth. Pygidium moderately broad at base, with the sides concavely arcuate to the subacute apex. Sculpture similar to that of male, but the mesonotum more shining, with the punctures of the scutum very fine but distinct. Pubescence similar, the apical fimbria of abdomen tinged with fuscous. Hair of middle and hind legs pale brownish, with that on outer side of middle tibiae and basitarsi short, dense and plumose, and the scopa of hind tibiae rather short, dense and moderately plumose. Length, 6 mm.; anterior wing, 4.4 mm.

Holotype male and allotype from BOX CANYON, RIVERSIDE COUNTY, CALIFORNIA, on *Phacelia crenulata*, April 4, 1937 (Timberlake).

Conanthalictus nigricans Timberlake, new species

The male of *nigricans* has a broad truncate inner tooth on the mandibles as in *C. macrops* Cockerell, but this species differs from all other *Phaceliapis* except *C. seminiger* Michener in having the abdomen black. It is found principally on large-flowered species of *Phacelia*, such as *P. grandiflora* and *P. minor*.

Male.—Head and thorax dark bluish-green, the labrum and clypeus black. Abdomen black, with the apical depression of tergites brownish. Base of mandibles black, the apical half rufotestaceous, becoming redder at apex. Antennae and legs blackish, the flagellum brownish beneath and the tibial spurs pale testaceous. Tegulae testaceous. Wings dusky hyaline, the nervures brown, subcosta and margins of stigma fuscous. Head a little longer than usual, distinctly broader than long, the inner orbits diverging in front. Mandibles large, with the inner dilation ending in a broadly truncate tooth and the apical tooth moderately long and slender. Antennae reaching about the tegulae, with the middle joints of flagellum about one and one-fourth times longer than thick and the first joint a little longer than the second and nearly equal to pedicel. Head and thorax finely tessellate and dullish, the basal area of propodeum finely granular and opaque. Abdomen minutely shagreened and dullish, but the venter shining. Pubescence whitish, rather long, erect, plumose and moderately abundant, with the apical fimbria of abdomen brown to fuscous. Hair of abdomen otherwise mostly fine and appressed, but becoming more erect toward sides of tergites. Venter mostly

nearly nude, except for thin hair on apical part, which forms a definite apical fringe on segment 4. Apical margin of ventral segment 5 slightly bisinuate, with a fine short fringe, which becomes dense and plumose on a slight prominence far to each side, and the apical corners of segments 3 and 4 with a tuft of much longer dull whitish, plumose hair. Median third of apical half of segment 6 convex and protruding apically as a short rounded lobe, fringed with short fuscous hair, and the disk on each side of the prominence with a deep impression which is open outwardly and narrowed much more than one-half at inner end; inner half of posterior wall of the impressions in the form of a low angular lobe and armed with a short spine inwardly and then with a clump of two or three spines so close together that they appear to form a blunt projection. Length 4.5–6 mm.; anterior wing, 3.5–4 mm.

Female.—Head and thorax dark green, with the clypeus, mesoscutum except anterior border, and scutellum black. Abdomen black, with apical margin of ventral segments and apical depression of tergites brownish. Mandibles rufotestaceous becoming more reddish at apex and blackish at base. Antennae blackish, the flagellum reddish-brown beneath. Legs blackish, with nearly the basal half of hind tibiae ferruginous above and behind and the tibial spurs testaceous. Tegulae and wings as in male. Head somewhat broader than long, the inner orbits a little divergent anteriorly. Mandibles with a small inner tooth. Antennae hardly clavate, the joints of flagellum mostly slightly shorter than thick. Pygidial plate triangular, subacute at apex, but usually hidden by the fimbria. Head and thorax finely tessellate and moderately dullish, but the disk of mesoscutum and the scutellum sometimes rather shiny. Frons with numerous, but widely separated, minute punctures, and those of mesoscutum much sparser. Basal area of propodeum granular and opaque. Abdomen minutely shagreened and duller than thorax. Pubescence whitish, much as in the male, with the apical fimbria fuscous; gradulus of tergites 2 to 5 with a fringe of short fine hair. Hair of hind knees brown and scopa of hind tibiae tinged more or less with brownish ochreous, especially over the ferruginous part of surface. Ventral segments 2 and 3 with moderately dense erect hair across the apical half or a little more of the disk. Length, 5–5.5 mm.; anterior wing, 3.3–3.8 mm.

Holotype male and allotype from RIVERSIDE, CALIFORNIA, on *Phacelia minor*, April 22, 1927 (Timberlake). Also the following paratypes: 72 males, 34 females, Riverside, on same flower, except 2 females on *Phacelia distans* but not collecting pollen, and 1 male on *Cryptantha intermedia*, the males March 5 to April 22 and the females from March 5 to May 6 in different years; 3 males, 3 females, The Gavilan, Riverside County, on *P. minor*, except 1 male on *Cryptantha* and another on *Emmenanthe*, March 15 to April 27; 3 males, La Crescenta, Los Angeles County, on *P. minor*, April 28, 1934, and May 5, 1935; 10 males, 1 female, Mill Creek, San Bernardino

Mountains, 3500 feet, on *Phacelia brachyloba* (female collecting pollen), May 30, 1936 (Timberlake); 1 male, 4.5 miles south of Camp Angelus, San Bernardino Mountains (probably about 4000 feet, Mountain Home Creek), July 1, 1940 (collector unknown); 8 males, 2 females, Camp Angelus, on *Phacelia douglasii*, June 28, 1952 (R. H. and T. D. Beamer, W. La Berge, A. Wolf, Chang Liang, and C. Weiner); and 40 males, 59 females, San Marcos Ranch, Santa Inez Mountains, Santa Barbara County, on *Phacelia grandiflora*, July 5, 1956 (E. G. Linsley and P. D. Hurd, Jr.).

CONANTHALICTUS SEMINIGER Michener

The type locality of *seminiger* is the Eagle Rock Hills, Los Angeles County, California, and the type female was collected by Michener at flowers of *Rhamnus crocea*. It has been taken elsewhere at flowers of *Emmenanthe pendulifera* from which the female collects pollen. I have collected this species at Whittier, Riverside, and The Gavilan in the counties of Los Angeles and Riverside.

Conanthalictus deserticola Timberlake, new species

This is the smallest of the California species. The male is distinguished by having the hind tibiae and basitarsi with dense white hair and the apical margin of ventral segments 4 and 5 simple. The female has a red abdomen and is distinguished from other similar species by the small size and the white hair on each side of the apical margin of tergites 1 to 4.

Male.—Head and thorax blue-green, the clypeus and abdomen black, with apical depression of tergites somewhat reddened. Legs and antennae blackish, the flagellum more brownish. Mandibles rufotestaceous, becoming blackish at base and apex. Tegulae testaceous hyaline. Wings hyaline, the nervures testaceous, the subcosta, margins of stigma and metacarpus fuscous. Head about as broad as long, the cheeks one-half as wide as eyes. Mandibles slender, with an acute inner tooth and a long slender apical tooth. Antennae short, weakly clavate, the scape about four times longer than wide, the middle joints of flagellum somewhat thicker than long. Second submarginal cell more or less short, or twice or more as high as long. Head and thorax finely tessellate, rather dull and impunctate, but the clypeus smooth and shining and basal area of propodeum granular-tessellate and duller than other parts. Ventral segments 4 and 5 simple across the apex, but 5 with a minute tubercle at apical corners. Segment 6 with a large deep impression on each side, with the apical middle a little produced and prominent and invested with very fine short hair. Hind tibiae clavate, flat on inner side, its anterior margin on apical half with rather long,

dense white hair. Hind basitarsi about four times longer than wide, a little longer than following joints combined and clothed beneath with dense white hair which projects from the anterior margin. Pubescence of head and thorax white, dense on sides of face opposite antennae, moderately thick on cheeks and sides of thorax, long, thin and coarse on anterior third of mesoscutum and across apical part of scutellum. Basal margin of the apical depression of the abdominal tergites with white hair on each side of the segments, and the dense apical fimbria brown. Length, 3.5 mm.; anterior wing, 2.5 mm.

Female.—Head and thorax blue-green, the frons and vertex appearing almost blackish in some aspects, and the clypeus, disk of mesoscutum and the scutellum black. Abdomen bright ferruginous, the foveal impression on each side of tergite 2 not much darkened. Legs black, the hind tibiae and tarsi ferruginous. Antennae black, the flagellum more brownish and becoming paler beneath. Mandibles ferruginous. Tegulae and wings as in male. Sculpture and pubescence much as in the male, but the frons with a few scattered minute punctures. Antennae slightly shorter and more clavate than in the male. Length, 4 mm.; anterior wing, 2.4 mm.

Holotype male collected about halfway between MECCA and DOS PALMAS, RIVERSIDE COUNTY, CALIFORNIA, on *Nama demissum*, March 19, 1927 (Timberlake); 3 males, 1 female (paratypes and allotype), 27 miles north of Vidal, San Bernardino County, April 13, 1958 (J. W. MacSwain); 2 males (paratypes), Glamis, Imperial County, on *Nama demissum*, April 3, 1960 (Timberlake); 1 male (paratype), 12 miles north of Ogilby, on *Oenothera clavaeformis*, March 14, 1960 (P. H. Raven).

***Conanthalictus namatophilus* Timberlake, new species**

The male of *deserticola* has conspicuous white hair on hind basitarsi as in *minor*, but ventral segments 4 and 5 of abdomen are armed apically with tubercles, a median one on segment 4 and median and lateral ones on segment 5.

Male.—Head and thorax dark blue, the clypeus black. Abdomen blackish, with the apical depression of tergites, especially that of tergite 1, reddened. Antennae and legs blackish, more or less tinged with brown. Mandibles becoming more yellowish at middle and red at apex. Tegulae testaceous hyaline. Wings slightly dusky hyaline, the nervures brownish testaceous, with the subcosta, outer margin of stigma and metacarpus fuscous.

Head large, somewhat broader than long and broader than thorax, the cheeks almost as broad as the eyes. Mandibles strongly curved, with an obliquely truncate inner tooth, moderately dilated at middle third before the tooth, and with a long slender apical tooth. Antennae slender, the scape about five times longer than wide, and the flagellum cylindrical, only slightly increasing in thickness apically and with the middle joints as long as thick. Second submarginal cell moderately narrowed above, with the first three abscissi of the radius about equal. Head and thorax dull from a minute

tessellation, the face opaque and impunctate, and the basal area of propodeum more granular-tessellate than other parts. Abdomen microscopically lineolate and dull, the venter finely tessellate and more shining and with fine scattered punctures, not numerous except on segment 5. Ventral segments 4, 5 and 6 each with a small median protuberance at apex, invested with short fine hair and segment 5 with a similar protuberance on apical corners. Segment 6 deeply foveate on each side of apical half, with the median elevation rather sharply tectiform and produced almost spurlike apically; apical margin of this segment with about three small erect spines far to each side. Hind tibiae only moderately thickened apically, with the white hair on anterior margin toward apex much less developed than in *minor*. Hind basitarsi about five times longer than wide, with the white hair on under surface forming a dense fringe on anterior margin. Pubescence of head and thorax white, dense on sides of face opposite antennae and otherwise much as in *minor*, except that the hair of mesonotum is fine and more evenly distributed; white hair on each side of apical margin of the tergites also less developed than in *minor* and is most noticeable on tergite 2; apical fimbria of abdomen brown. Length, 4–5 mm.; anterior wing, 2.5–3 mm.

Holotype male from SALT CREEK, RIVERSIDE COUNTY, CALIFORNIA, on *Oenothera brevipes*, March 19, 1927; and 1 male (paratype), 7.5 miles south of Twentynine Palms, Joshua Tree National Monument, Riverside County, on *Nama demissum*, May 7, 1948 (Timberlake).

***Conanthalictus minor* Timberlake, new species**

The male of *namatophilus* has the mandibles slender, with a narrow inner dilation which passes obliquely and more or less abruptly into the rather long and tapering apical tooth. In regard to this character it is similar to *caerulescens* but the female has the abdomen light ferruginous.

Male.—Head and thorax dark blue, or blue-green, the clypeus black. Abdomen with a slight greenish tinge, the venter and apical depression of tergites brownish and pygidial plate of tergite 7 rufotestaceous. Mandibles blackish at base, testaceous at middle and red at apex. Antennae and legs blackish, tinged more or less with brown, especially on flagellum and the tarsi, with apical joint of tarsi more distinctly brown. Tegulae testaceous hyaline. Wings dusky hyaline, the nervures and stigma brownish testaceous, with subcosta and sometimes the margins of stigma dark brown to fuscous.

Head rather large, broader than thorax and broader than long, with the inner orbits of eyes somewhat diverging anteriorly. Antennae rather short, although relatively somewhat longer than in *bakeri*, with the joints of flagellum about as long as thick, except the second which is somewhat shorter. Head and thorax nearly uniformly and finely tessellate and dull and without distinct punctures except on the clypeus. Abdomen minutely shagreened and dullish. Pubescence white, moderately thin and erect, becoming denser and plumose on sides of face opposite the antennae; apical

fimbria of abdomen brown. Venter with rather close-set, fine, appressed hair, and segment 5 with a little clump of short brown hair on a small rounded protuberance on each side of the apical margin. Segment 6 of venter having the median fourth of apical margin convex, slightly produced and invested with short pile, and excavated on each side, the excavations open anteriorly and outwardly, with the inner margin of the pit armed with one small spine and the posterior margin with three close together. Length, about 4–4.5 mm.; anterior wing, 3–3.5 mm.

Female.—Head and thorax dark blue-green, the clypeus, mesoscutum except anterior third and scutellum black. Abdomen ferruginous red, of a somewhat paler shade than in *macrops*, *cockerelli*, and *mentzeliae*. Mandibles testaceous, a little darker at base and red at apex. Scape and pedicel of antennae blackish, the flagellum brown. Legs blackish, the knees, tibiae and basitarsi of hind legs usually ferruginous, and apex of front and middle tibiae also often brown. Tegulae and wings as in the male.

Head as long as wide and hardly wider than thorax. Antennae short and somewhat clavate, the joints of flagellum thicker than long, but flagellum a little more slender than in the female of *bakeri*. Mandibles tapering, with a small inner tooth. Pygidial plate very narrowly rounded at apex. Sculpture and pubescence about as in the male, the apical fimbria of abdomen pale brown. First two segments of venter with rather short, erect and moderately dense hair, with that of the following segments becoming increasingly shorter and more depressed. Length, about 4–5 mm.; anterior wing, 2.8–3.3 mm.

Holotype male, allotype and one paratype, a male, from ONE AND ONE-HALF MILES SOUTH OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, on *Nama demissum* var. *deserti*, April 25, 1937 (Timberlake). Also the following paratypes: SAN BERNARDINO COUNTY: 1 male, 2 females, Morong Valley, on *Nama*, April 19, 1937; 1 female, seven miles north of Llano, on *Nama*, May 7, 1937; 6 males, Apple Valley, on *Nama*, May 9, 1958 (Timberlake); 16 males, 2 females, Kramer Hills, on *Nama*, May 1, 1953 (Hurd, Marsh and Schuster); 1 male, 2 females, Kramer Hills, April 26, 1957 (Stage and Powell); 1 female, Morongo Valley (G. I. Stage). RIVERSIDE COUNTY: 5 females, Palm Springs, four on *Nama*, one on *Oenothera*, March 21–26, 1932; 3 females, 7.5 miles south of Twentynine Palms, on *Nama*, May 7, 1948 (Timberlake). INYO COUNTY: 2 males, 4 females, Cartago, on *Phacelia* sp. near *fremonti*, May 2, 1927 (Timberlake).

CONANTHALICTUS MACROPS Cockerell

The type locality of *macrops* is Claremont, California. It has been taken in some numbers also at Tetley Park, San Bernardino Mountains, on *Phacelia davidsonii*, May 15, 1937 (Timberlake), and at Swartout Valley, San Gabriel Mountains, on the same

flower, June 3, 1928.

Conanthalictus cockerelli Timberlake, new species

The male of this species and of *macrops* are similar and both differ from *mentzeliae* in the smaller size, much shorter antennae and dull mesonotum. The difference between this species and *macrops* in both sexes is brought out in the table.

Male.—Head and thorax dark green, the clypeus black. Mandibles black at base, testaceous in middle and red at apex. Labrum dark rufotestaceous. Abdomen blackish with the apical depression of tergites brownish testaceous. Antennae and legs blackish. Tegulae pale testaceous. Wings somewhat dusky hyaline, the nervures brown, with the subcosta and margins of stigma fuscous.

Head large, somewhat broader than long and broader than thorax, the cheeks broad, inner orbits moderately diverging in front. Antennae slender, with pedicel and first six joints of flagellum longer than thick, except the second which is as thick as long. Mandibles with a broad and obliquely truncate inner tooth, which is separated from the slender apical tooth by a deep emargination. Apical half of segment 6 of venter with a broad convex median part, and with the outer fourth on each side deeply pitted. Segment 5 with a small rounded subapical prominence on each side, covered with fine short pubescence. Head and thorax finely tessellate and dull, without distinct punctures except on the clypeus and mesopleura, the base of propodeum more granular than other parts and opaque. Abdomen microscopically shagreened and dull. Pubescence white, erect and moderately abundant on head and thorax, and the apical fimbria of abdomen brown. Segment 2 of venter with a sparse, very fine and short pubescence, and at outer corners of two following segments is a tuft of long white hair. Length, 3–5.5 mm.; anterior wing, 3.8 mm.

Female.—Head and thorax dark green, the clypeus, posterior half of mesoscutum and the scutellum black. Abdomen dull ferruginous red, with the lateral and basal margins of tergite 1 blackish, and the lateral foveae of tergite 2 black. Mandibles piceous, becoming rufotestaceous at middle. Antennae and legs blackish, with the flagellum of antennae reddish-brown beneath. Tegulae and wings as in male.

Head distinctly broader than long and somewhat broader than thorax, with the inner orbits moderately diverging in front. Head and thorax minutely tessellate and dull, with the basal area of propodeum more granular and opaque; frons, vertex and mesonotum with sparse, minute and indistinct setiferous punctures. Abdomen microscopically tessellate and dullish. Pubescence white, erect and moderately abundant on head and thorax, with the hair on frons and disk of mesonotum rather short. Apical fimbria of abdomen dense and brown, and the scopal hair on outer side of hind tibiae and basitarsi tinged with brown. First three segments of venter with rather dense erect hair, long on the first two segments, and serving as a supplementary scopa. Length 5–5.5 mm.; anterior wing, 3.3–3.5 mm.

Holotype male, allotype and five paratypes (1 male, 4 females) from ELEVEN MILES SOUTHWEST OF VICTORVILLE, SAN BERNARDINO

COUNTY, CALIFORNIA, on *Phacelia fremonti*, April 25, 1937 (Timberlake).

***Conanthonauctus mentzeliae* Timberlake, new species**

This species is the largest in a group of five species that have the head of the male distinctly broader than long and the mandibles with a slender apical tooth and a broadly truncate inner tooth. Three of the females belonging here, including *mentzeliae*, have a red abdomen, but it is black in *seminiger* and *nigricans*. *C. mentzeliae* is most similar to *macrops*, but is considerably larger and the antennae of the male are unusually long and clavate.

Male.—Head and thorax dark blue-green, the abdomen black, with the apical depression of tergites brownish. Mandibles black at base, testaceous in middle and red at apex. Antennae black, the flagellum a little brownish beneath. Legs black, the tibial spurs testaceous and the claws rufotestaceous. Tegulae pale amber color. Wings faintly dusky hyaline, the nervures brown, with subcosta and margins of stigma fuscous.

Head large, broader than long and broader than thorax, with the cheeks and temples broad but receding and the inner orbits divergent in front. Mandibles strongly curved, with a broad evenly truncate inner tooth and a long slender incurved apical tooth. Antennae slenderly clavate, reaching middle of mesoscutum, with the scape long and slender, the pedicel and six following joints much longer than thick and the five apical joints gradually thickened. Segments 3 to 5 of venter somewhat biarcuately margined at apex and somewhat produced in middle, the fifth with short dense hair on a low, transverse, preapical elevation on each side. Segment 6 with the middle third of the width produced into a rounded lobe, which is about one-half as long as wide, and with a deep pit on each side, the middle of the posterior margin of the pits armed with one spine. Head and thorax minutely tessellate and dullish, the mesoscutum sometimes, but not always, much more delicately tessellate and more shining than other parts, and the basal area of propodeum minutely granular and opaque. Puncturation very minute and indistinct except on the clypeus and mesopleura. Abdomen microscopically shagreened and dull, and the apical tergites minutely punctured. Pubescence whitish, long, thin and erect, but becoming somewhat denser and more plumose on sides of face opposite the antennae, and on the scapes; a narrow band of thin white hair across the apical depression of tergites 2 to 3, but broadly interrupted in middle, and a similar but brown fringe across apex of tergites 4 and 5; the apical fimbria of tergite 6 long, dense, plumose and brownish fuscous. Length, 6.5 mm.; anterior wing, 4.3–4.5 mm.

Female.—Head and thorax dark blue-green, the labrum, clypeus, supra-clypeal area, disk of mesoscutum and the scutellum black. Abdomen ferruginous, the pygidial plate black. Antennae blackish, with the flagellum reddish brown at apex and beneath. Mandibles rufotestaceous, more reddish at apex and narrowly black at base. Legs blackish, the spurs testaceous. Tegulae pale testaceous. Wings dusky hyaline, the nervures brown, with the

subcosta and outer margin of stigma fuscous.

Head about as broad as long and somewhat broader than thorax, with the inner orbits rather distinctly but only slightly diverging in front. Mandibles stout, with a blunt inner tooth. Antennae subclavate, hardly reaching beyond the occiput, the pedicel much thicker and longer than the next two joints but not equalling their combined length. Pygidial plate subtriangular, a little longer than wide and rounded at apex. Head and thorax finely tessellate and dullish, with the disk of mesoscutum and the scutellum smoother and more shining, and the basal area of propodeum duller than other parts; frons, vertex, mesonotum and mesopleura with very fine but distinct and well-separated punctures. Pubescence sparse, fine and white, becoming a little denser and more plumose on sides of face opposite antennae; a thin band of white hair on each side of the apex on tergites 2 and 3, and the gradulus at base of tergites 3 and 4 with a fringe of very short hair; apical fimbria a pale brown. Segments 1 and 2 of venter with rather long and dense erect hair, which serves as a supplementary scopa. Length, 6.5–7 mm.; anterior wing, 4.3 mm.

Holotype male, allotype and five paratypes (males) from KRAMER HILLS, SAN BERNARDINO COUNTY, CALIFORNIA, on *Mentzelia*, April 26, 1957 (Paul D. Hurd, Jr.); 1 male, 1 female (paratypes) Kramer Hills, April 26, 1957 (Powell and Stage); 1 male (paratype), Kramer Hills, on *Malacothrix*, May 2, 1953 (Hurd); 1 male (paratype), Kramer Junction, April 27, 1949 (Linsley, Ray Smith and MacSwain); 1 female (paratype), 7.5 miles south of Twentynine Palms, Riverside County on *Mentzelia albicaulis*, May 7, 1948 (Timberlake).

The following material from Inyo County belongs with *mentzeliae* but is not typical, as the tessellation of the mesonotum is much stronger: 2 females, 2 males, Mazourka Canyon, 6000 feet, Inyo Mountains, the males and one female on *Phacelia*, the other female on *Mentzelia affinis*, May 23, 1937 (C. D. Michener).

Subgenus CONANTHALICTUS Cockerell

CONANTHALICTUS CONANTHI (Cockerell)

On the mesa about three miles east of the agricultural college at Mesilla Park, New Mexico, on September 19, 1957, I found only one plant of *Nama hispidum* and from its flowers I was able to capture four females of *C. conanthi* (Cockerell). Also one female of *conanthi* has been taken 2.5 miles north of Rodeo, Hidalgo County, New Mexico, September 7, 1959 (D. D. Linsdale).

CONANTHALICTUS COTULLENSIS Crawford

Of this species I have examined only one male, probably one of the original type series, and taken at Cotulla, Texas, in 1906 by Crawford.

Subgenus SPHECODOSOMA Crawford

Sphécodosoma differs from the other groups of *Conanthalictus* in having a much longer proboscis, with very long maxillary palpi.

CONANTHALICTUS PRATTI (Crawford)

Material examined as follows from Texas: 1 pair, Cotulla, Lasalle County, the female labeled a cotype; 1 male, 12 miles north of Mason, Mason County, on *Lesquerella*, April 13, 1952 (C. D. Michener); 13 females, 20 males, San Ygnacio, Zapata County, April 15, 1952 (Michener and the Beamers); 2 males, five miles east of Riogrande, Starr County, April 10, 1950 (the Beamers, Stephen, Michener and the Rozens).

The material recorded above exhibits considerable variation, but the basal area of the propodeum is always finely rugose almost to the apex, with the apical margin usually a little raised and dullish. Several specimens have only two submarginal cells on either one or both wings, and either the first or second intercubitus may be wanting. Females vary in the shape of the head, which is usually rather distinctly longer than wide, but in some specimens the head is nearly as wide as long. The mesonotum is often somewhat dullish, especially on each side or on the posterior border of the scutum, where an extremely fine puncturation becomes sparser towards the median line. Sometimes, however, the mesonotum is more shining, with more or less sparse and unequal punctures, and the very fine puncturation becomes obscure or obsolescent.

Conanthalictus dicksoni Timberlake, new species

This new species is similar to *pratti* and possibly may prove to be a subspecies. It is slightly larger, with a broader head; the head and thorax are polished, with minute sparse punctures on the mesoscutum, and the basal area of propodeum is minutely roughened only on the basal half, with a very broad shining area on each side and a narrower shining space across the apex. The antennae of the male also are more elongate.

Female.—Head and thorax black, the abdomen dark red, with base of tergite 1 often infuscated and a large round black spot on lateral margins of tergite 2. Mandibles reddish at apex. Antennae black, the flagellum reddish brown toward apex and also beneath except on one or two joints at base. Legs black, the base of hind tibiae slightly reddened and the spurs rufotestaceous. Tegulae blackish at base and testaceous on outer margin.

Wings subhyaline, the nervures brown, the subcosta and outer margins of stigma fuscous.

Head slightly longer than wide and no wider than thorax, the inner orbits parallel. Galeae of proboscis, when folded in repose, reaching halfway to the base and the maxillary palpi well beyond the base of stipites. Proboscical fossa much wider in front than posteriorly. Mandibles tapering, acute and with a minute inner tooth. Antennae very short and strongly clavate, the joints of flagellum except the first and last broader than long, with joints 2 to 4 very short and discoid. Second submarginal cell usually about twice as high as long, with nearly parallel sides and the first recurrent nervure received near its apex; second intercubitus sometimes partly obsolete and entirely absent on one wing of one specimen. Hind tibiae strongly widened from the base toward apex, the scopal hair on outer surface long, moderately thin, depressed and fringing the hind margin where it is supplemented by plumose hair on the inner surface. Head and thorax polished, with minute and widely separated punctures on the frons and mesonotum, but the flanks of propodeum minutely shagreened and slightly dullish. Basal area of propodeum shallowly depressed toward base and minutely roughened on basal half, but the apical border and a broad area on each side polished. Abdomen shining, with a minute and moderately close puncturation. Pubescence short, appressed and white, most abundant around the base of the antennae and on posterior margin of pronotum and the tubercles. Hair of apical tergites long and rather thin, but more or less obscuring the short, dense brownish or fuscous fimbria on apex of tergite 5. Hair across the apical part of ventral segments moderately short and rather dense, becoming more erect on basal segments. Middle tibiae armed with short, stiff and more or less hooked setae on anterior margin of the apical half. Length, about 4.5 mm.; anterior wing, 2.9 mm.

Male.—Head, thorax, abdomen and legs black, with apex of abdomen ferruginous. Antennae black at base, the flagellum blackish above and broadly yellowish-brown beneath. Tegulae and wings as in female.

Head about one and one-fourth times longer than wide, the inner orbits slightly converging in front. Antennae long and cylindrical, the joints of flagellum about twice as long as thick and slightly nodose; pedicel as long as thick and shorter than the following joint. Legs more slender than in female. Sixth ventral segment of abdomen with a small medioapical impression, which is set off by a blunt, carinate tubercle on each side and by a more slender preapical median tubercle. Sculpture much as in female, the basal area of propodeum minutely rugose and dull except for a broad apical rim. Pubescence similar, but anterior half of face with rather dense white hair and apex of abdomen without a dark fimbria. Length, about 4 mm.; anterior wing, 2.7 mm.

Holotype female and allotype, EIGHTEEN MILES WEST OF BLYTHE, RIVERSIDE COUNTY, CALIFORNIA, on *Nama hispidum*, April 29, 1952 (Timberlake). Paratypes as follows: 4 females, 6 males taken with the types; 1 female, April 15, and 5 females, 2 males, April 17, 1958, at the same flower and place (Timber-

lake); 1 female, 2 males, same locality, the female on *Coldenia*, April 29, 1952 (P. D. Hurd, Jr. and J. G. Rozen); 4 females, five miles north of Palo Verde, on the same *Nama*, April 19, 1949 (R. C. Dickson).

One female, Davis Mountains, Texas, April 17, 1954 (R. H. Beamer) is certainly conspecific, as well as one female from nine miles south of San Juan del Rio, Durango, Mexico, August 21, 1960 (Arnaud, Ross and Rentz).

ZOOLOGICAL NOMENCLATURE: NOTICE OF PROPOSED USE OF
PLENARY POWERS IN CERTAIN CASES (A.[N.S.]47)

In accordance with a decision of the 13th International Congress of Zoology, 1948, public notice is hereby given of the possible use by the International Commission on Zoological Nomenclature of its plenary powers in connection with the following cases, full details of which will be found in *Bulletin of Zoological Nomenclature*, Vol. 18, Part 2 to be published on 14 April 1961.

- (1) Validation of the generic name *Enhydrus* Castelnau, 1834 (Insecta, Coleoptera). Z.N.(S.) 398.
- (3) Suppression of the generic name *Doralis* Leach, 1827 (Insecta, Hemiptera). Z.N.(S.) 583.
- (6) Designation of a type-species for *Nemoura* Latreille, 1796 (Insecta, Plecoptera). Z.N.(S.) 1452.
- (7) Validation of the generic name *Silo* Curtis, 1833 (Insecta, Trichoptera). Z.N.(S.) 1455.

Any zoologist who wishes to comment on any of the above cases should do so in writing, and in duplicate, as soon as possible, and in any case before 14 October 1961. Each comment should bear the reference number of the case in question. Comment received early enough will be published in the *Bulletin of Zoological Nomenclature*. Those received too late for publication will, if received before 14 October 1961, be brought to the attention of the Commission at the time of commencement of voting.

All communications on the above subject should be addressed as follows: The Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, London, S.W. 7, England.—W. E. CHINA, *Assistant Secretary, International Commission on Zoological Nomenclature*.